

ELATERIDAE (COLEOPTERA) FROM THE NATURAL
HISTORY SURVEY OF THE PHILIPPINES BY THE
OSAKA MUS. NAT. HIST. AND THE NAT. MUS. OF
THE PHILIPPINES IN 1969*

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This paper is a result of the studies on the elaterid beetles from the Philippines during the Natural History Survey of the Philippines by the Osaka Museum of Natural History in co-operation with the National Museum of the Philippines in 1969.

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Subfamily Chalcolepidiinae SCHENKLING, 1925

Paracalais semperi (CANDÈZE, 1875) (Pl. 1, f. A)

Alaus semperi CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18: 120 (Mindanao).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59 (3): 401 (Mindanao, Samar).—VAN ZWALUWENBURG, 1959, Pacif. Ins. 1(4): 362 (Mindanao).

Paracalais semperi: ÔHIRA, 1972, Bull. Aichi Univ. Educ. 21: 45, pl. 1, f. D (Leyte).

Specimen examined: MINDANAO: 1 ♂, Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Mindanao, Leyte, Samar).

Subfamily Agrypninae FLEUTIAUX, 1919

Agraeus mannerheimi CANDÈZE, 1857 (Pl. 1, f. B)

Agraeus mannerheimi CANDÈZE, 1857, Mon. Élat. I: 166, t. 3, f. 4 (Java).—FLEUTIAUX, 1935, Ann. Soc. Ent. Fr.: 26 (Java, Sumatra, Malacca, Borneo, Philippines).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 399 (Luzon, Negros).—ÔHIRA, 1970, Ann. Hist. Nat. Mus. Nat. Hung. 62: 236, pl. 8, f. A, B (Singapore).

Agraeus Risternae CANDÈZE, 1883, Notes Leyd. Mus. 5: 204 (Sumatra).

Specimen examined: MINDANAO: 1 ♀, Sibulan Beach, Darong, Davao del Sur, 25. XII. 1969, Y. Miyatake leg.

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Philippines Natural History Papers, No. 7.

Distribution: Philippines (Luzon, Mindanao, Negros), Malacca, Singapore, Sumatra, Java, Borneo.

Brachylacon (Brachylacon) borneoensis ÔHIRA, 1973 (Pl. 1, f. C)

Brachylacon (Brachylacon) borneoensis ÔHIRA, 1973, Pacif. Ins. 15(1): 106, f. 4 L (Borneo).

Specimens examined: LUZON: 2 exs., Mt. Maquiling, alt 100 m to Mudspring, alt 400 m, Laguna, 17-21. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon), Borneo (Sabah).

The first record of this species was found from Borneo. I have examined two specimens from Luzon I. of the Philippines, where the species has not been recorded.

Subfamily Negastrinae NAKANE ET KISHII, 1956

Hypdonus bakeri (FLEUTIAUX, 1914) (Pl. 1, f. F)

Hypnoidus bakeri FLEUTIAUX, 1914, Philip. J. Sci. 9(5), Sec. D: 446 (Luzon).

Quasimus (Hypdonus) Bakeri: FLEUTIAUX, 1928, Bull. Soc. Ent. Fr.: 149 (Philippines, Singapore, Borneo).

Hypnoidus (Hypdonus) Bakeri: VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 419 (Luzon).

Hypdonus bakeri: STIBICK, 1971, Pacif. Ins. 13(2): 374.

Specimen examined: MINDANAO: 1 ♀, Upper Catigan, alt 800 m, Davao City, 22. XI. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon, Mindanao), Singapore, Borneo?

Hemirrhaphes cruciatus FLEUTIAUX, 1916

Hemirrhaphes cruciatus FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 228 (Luzon).—

VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 419 (Luzon).

Specimens examined: MINDANAO: 2 ♀, Upper Catigan, alt 800 m, Davao City, 22. XI. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon, Mindano).

This species is here recorded from Mindanao I. for the first time.

Hemirrhaphes candezei FLEUTIAUX, 1916 (Pl. 1, f. E)

Hemirrhaphes candezei FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 228 (Luzon).—

VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 419 (Luzon).

Specimens examined: MINDANAO: 10 exs., Upper Catigan, alt 800 m~1100 m, Davao City, 21-27. XI. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon, Mindanao).

This species is here recorded from Mindanao I. for the first time.

Subfamily Physorrhinae FLEUTIAUX, 1919

Anchastus rufangulus CANDÈZE, 1875

Anchastus rufangulus CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18: 121 (Mindanao).—FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 227 (Luzon).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 47 (Luzon, Mindanao).

Length 5 mm, width about 1 mm. Body elongate, sides nearly parallel and gently convex above; surface black except at anterior and posterior angles of pronotum and most parts of undersides of body yellow brown to reddish brown, antennae black (basal two segments yellow brown) and legs pale yellow; dorsal surface clothed with black to fulvous setae, but median portion of elytra has a transverse band of pale yellow setae.

Specimen examined: LUZON: 1 ♀, Mt. Maquiling, Mudspring, alt 400 m, Laguna, 21. XII. 1969, I. Hiura leg.

Distribution: Philippines (Luzon, Mindanao).

Subfamily Ampedinae FLEUTIAUX, 1947

Abelater morio (CANDÈZE, 1878) **comb. nov.** (Pl. 1, f. K)

Melanoxanthus morio CANDÈZE, 1878, Ann. Mus. Civ. Genova, 12: 128 (Celebes).—VAN ZWALUWENBURG, 1959, Pacif. Ins. 1(4): 387 (Celebes, Luzon).

Melanoxanthus ater FLEUTIAUX, 1914, Philip. J. Sci. 9(5), Sec. D: 445 (Luzon).—FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 225 (Luzon).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 410 (Luzon).

Specimens examined: MINDANAO: 10 exs., Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon, Mindanao), Celebes.

This small and black species is here recorded from Mindanao I. for the first time.

Abelater infimus (CANDÈZE, 1875) **comb. nov.**

Melanoxanthus infimus CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18: 124 (Mindanao).—FLEUTIAUX, 1914, Philip. J. Sci. 9(5), Sec. D: 445 (Luzon).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 413 (Luzon, Mindanao).

Specimens examined: MINDANAO: 1 ex., Mt. Apo, Upper Baroreng, alt 1300 m, Davao del Sur, 29-30. XI. 1969, Y. Miyatake leg.; ditto, 23 exs., Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg.; ditto, 1 ex., Adecor Farm, alt 150 m, Toril, Davao City, 3. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Luzon, Mindanao).

Abelater cinctus (FLEUTIAUX, 1916) **comb. nov.** (Pl. 1, f. D)

Melanoxanthus cinctus FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 224 (Luzon).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 411 (Luzon).—VAN ZWALUWENBURG, 1959, Pacif. Ins. 1(4): 386 (Luzon, Mindanao, Basilan).

Specimens examined: MINDANAO: 1 ex., Upper Catigan, alt 800 m, Davao City, 22. XI. 1969, Y. Miyatake leg.; ditto, 8 exs., Capatagan, alt 1100 m, Davao del

Sur, 1-2. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Basilan, Luzon, Mindanao).

Abelater davaoensis sp. nov. (Fig. 1)

Female. Length 5.5 mm, width about 1.5 mm. Body moderately elongate, sides subparallel and gently convex above; surface a little shining, black except at posterior angles of pronotum and elytra (suture intervals, at outer margins and posterior fourth of elytra black) yellow brown, antennae black (basal three segments blackish brown) and legs yellow brown, clothed with short, recumbent golden-yellow setae over surface, but some black parts of head, scutellum, pronotum and elytra provided with black setae.

Head gently convex between eyes, flattened on subvertical portion between antennae; surface microreticulate, moderately densely and evenly punctate, each puncture seemingly umbilical; clypeal margin well ridged and rounded at middle. Antenna short, not touching to posterior angle of pronotum; basal segment robust and subovate, second segment small and subcylindrical and a little longer than third which is subconic, fourth slightly longer than fifth and almost as long as second and third put together, fourth to tenth segments each compressed and having a longitudinal smooth ridge on outer side. Pronotum subcylindrical, a little longer than its width (length and width measured at median points), sides almost parallel on basal three-fourths, then rounded and converging towards anterior angles; disc dome-like, having a shallow, median longitudinal impression on basal third, surface microreticulate, moderately densely and evenly punctate, but punctures becoming denser and coarser laterally; posterior angles pointed behind, but not divergent, each bears a distinct carina above. Scutellum tongue-shaped, slightly convex at middle and obtusely pointed apically, punctulate and pubescent. Elytra about 2.2 times as long as its basal width, sides gradually converging from base to apices which are obliquely truncate; striae well defined, deeply and regularly punctate; intervals slightly elevated, microreticulate, irregularly granulated.

Male unknown.

Holotype: MINDANAO: ♀, Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg. Paratypes: MINDANAO: 2 ♀, same locality and date as holotype.

Distribution: Philippines (Mindanao).

A. davaoensis is somewhat allied to *A. philippinensis* (FLEUTIAUX, 1916) **comb. nov.** from the Philippines, but can be distinguished from the latter by the black pronotum and by the absence of a pair of subovate patches on the posterior portion of elytra.

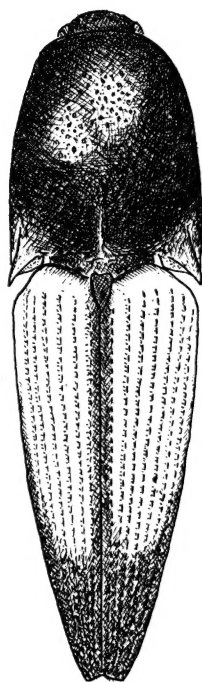


Fig. 1. *Abelater davaoensis* sp. nov. (female).

***Abelater miyatakei* sp. nov.** (Fig. 2)

Male. Length 5 mm, width about 1.5 mm. Body moderately elongate, sides subparallel and gently convex above. Surface a little shiny, black except prothorax reddish brown to brownish yellow, antennae black and legs blackish brown, with the disc of pronotum has a pair of black and broad longitudinal bands which are extending near base to anterior margin; surface clothed with short, recumbent, black setae except reddish areas of pronotum provided with golden-yellow setae.

Head gently convex between eyes, flattened on subvertical portion between antennae; surface coarsely and densely punctate, each puncture seemingly umbilical; clypeal margin well ridged and rounded at middle. Antenna elongate, extending beyond posterior angle of pronotum at least by apical most segment; basal segment robust and subovate, second segment small and globose, third subtriangular and about twice as long as second, fourth to tenth segments each compressed and having a longitudinal smooth ridge on outer side. Pronotum dome-like, sides nearly straight on basal two-thirds, then rounded and converging towards anterior angles; surface microreticulate, moderately densely

and evenly punctate, having a shallow median longitudinal smooth canaliculation on basal area; posterior angles pointed behind, not divergent, each with a distinct carina above. Scutellum tongue-shaped and weakly pointed apically, punctulate and pubescent. Elytra about 2.3 times as long as basal wide, sides gradually tapering from base to apices, with each apex weakly truncate; striae well defined, deeply and regularly punctate; intervals slightly elevated except suture ones which are clearly elevated on posterior three-fourths, microreticulate, irregularly and transversely rugose.

Female unknown.

Holotype: MINDANAO: ♂, Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg.

Distribution: Philippines (Mindanao).

A. miyatakei is somewhat allied to *A. cinctus* (FLEUTIAUX, 1916) from the Philippines, but can be distinguished from the latter by the wholly black elytra and having a pair of black longitudinal bands of pronotum.

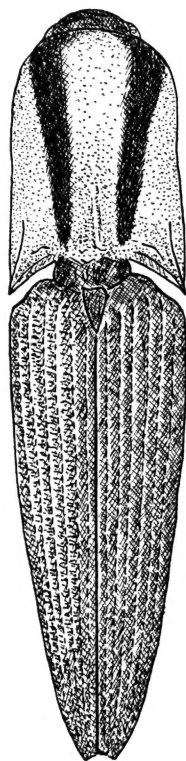


Fig. 2. *Abelater miyatakei* sp. nov. (female).

***Abelater mindanaoensis* sp. nov.** (Fig. 3)

Male. Length 4.5 mm, width about 1.2 mm. Body narrow and elongate, sides nearly parallel and gently convex above; surface rather opaque, black except prothorax (at sides of pronotum and most parts of propleura and prosternal process black to blackish brown) reddish brown and around scutellum of elytra yellow brown,

antennae and legs (knees and tarsi slightly blackish brown) black, clothed with short, recumbent, black setae except reddish areas of pronotum and most parts of ventral surface of body provided with golden yellow setae.

Head gently convex between eyes, flattened on subvertical portion between antennae; surface microreticulate, coarsely and densely punctate, each puncture seemingly umbilical; clypeal margin well ridged and rounded at middle. Antenna elongate, extending beyond posterior angle of pronotum at least by apical two segments; basal segment robust and subovate, second small and subglobose, third about twice as long as second and about two-thirds length of fourth one, from third to tenth segments feebly serrate and having a longitudinal smooth ridge on outer side. Pronotum subcylindrical, a little longer than its width (length and width measured at median), sides nearly straight on posterior two-thirds, then rounded and gradually converging towards anterior angles; surface microreticulate, moderately densely and evenly punctate, having a shallow median longitudinal smooth canaliculation on basal area; posterior angles pointed behind, but not divergent, each with a distinct carina above. Scutellum tongue-shaped, flattened and weakly pointed apically, punctulate and pubescent. Elytra about 2.5 times as long as its basal width, sides gradually converging from base to apices, with each apex transversely truncate; striae well defined, deeply and regularly punctate; intervals microreticulate and granulated.

Female. Very similar to male, but antennae shorter (almost as long as posterior angles of pronotum).

Holotype: MINDANAO: ♂, Capatagan, alt 1100 m, Davao del Sur, 1-2. XII. 1969, Y. Miyatake leg. Paratypes: MINDANAO: 1 ♂ 7 ♀, same locality and date as holotype.

Distribution: Philippines (Mindanao).

A. mindanaoensis is somewhat allied to *A. cinctus* (FLEUTIAUX, 1916) from the Philippines, but can be distinguished from the latter by the reddish pronotum and very small and obscure patterns on the base of elytra.

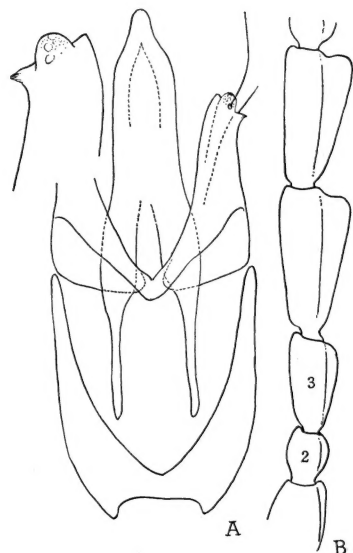


Fig. 3. Aedeagus and some basal segments of male antenna of *Abelater mindanaoensis* sp. nov.

Subfamily Melanotinae JACOBSON, 1913

Melanotus (*Melanotus*) *ebeninus* CANDÈZE, 1860 (Pl. 1, f. G)

Melanotus ebeninus CANDÈZE, Mon. Élat. III: 335 (Philippines).—CANDÈZE, 1875, Ann.

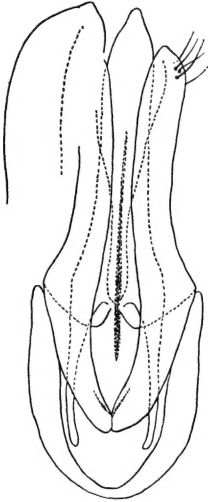


Fig. 4. Aedeagus of *Melanotus* (*Melanotus*) *palawanensis* sp. nov.

Soc. Ent. Belg. 18: 126 (Philippines).—FLEUTIAUX, 1914, Philip. J. Sci. 9(5), Sec. D: 448 (Luzon).—FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D: 231 (Luzon, Mindanao).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 424 (Batan, Jolo, Luzon, Mindanao, Panay).—VAN ZWALUWENBURG, 1959, Pacif. Ins. 1(4): 399.

Specimen examined: LUZON, 1 ♀, YMCA Hotel, Concepcion St., Manila, 19. XI. 1969, I. Hiura leg.

Distribution: Philippines (Batan, Jolo, Luzon, Mindanao, Panay).

***Melanotus* (*Melanotus*) *palawanensis* sp. nov.** (Fig. 4; Pl. 1, f. H)

Male. Length 12 mm, width about 3 mm. Body elongate, sides nearly parallel and gently convex above; surface moderately shiny, dusky castaneous brown entirely except head and pronotum slightly darker, antennae and legs dark reddish brown; vestiture pale yellow on head and pronotum, paler on elytra and intermixed with long erect hairs among short recumbent ones, recumbent and cinereous on undersides.

Head slightly convex between eyes, almost flattened and broadly depressed between antennae; surface coarsely and rather densely punctate, each puncture seemingly umbilical; clypeal margin rounded and broadly expanded anteriorly; eyes large and prominent. Antenna rather short, almost just reaching to posterior angle of pronotum; basal segment robust and subovate, second segment short and subcylindrical, third a little longer than second and subclavate, fourth to tenth segments rather strongly serrate. Pronotum a little longer than its width (length and width measured at median points); sides weakly sinuate just before posterior angles, then gradually converging towards anterior angles; disc moderately convex, bearing a very shallow, median longitudinal impression on basal area; surface densely, coarsely and evenly punctate, but punctures becoming denser and coarser than on head; posterior angles short and not divergent, each bears a well-ridged carina above. Scutellum subquadrate, longer than wide, punctulate and pubescent. Elytra about 2.6 times as long as its basal width; sides nearly parallel from base to apical third, then rounded and gradually converging towards posteriorly, with each apex minutely pointed; striae well defined, deeply and regularly punctate; intervals almost flattened (except at basal area of seventh intervals strongly ridge-like elevated), punctulate and slightly rugose. Aedeagus as figured.

Female unknown.

Holotype: PALAWAN: ♂, Quezon, alt 5~50 m, West coast of Palawan, 12. XII. 1969, Y. Miyatake leg.

Distribution : Philippines (Palawan).

M. (M.) palawanensis is closely allied to *M. (M.) ebeninus* CANDÈZE, 1860 from the Philippines, but can be distinguished from the latter by the slender and dusky-castaneous body, the well-expanded clypeal margin, the coarsely and deeply punctate on the disc of pronotum, the greyish hairs and the well-defined striae on elytra.

Subfamily Elaterinae FLEUTIAUX, 1936

Neotrichophorus phillipsi VAN ZWALUWENBURG, 1936 (Pl. 1, f. I)

Neotrichophorus phillipsi VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3): 426 (Mindanao).

Specimens examined : MINDANAO : 2 ♀, Capatagan, alt 1100m, Davao del Sur, 1-2.

XII. 1962, Y. Miyatake leg.

Distribution : Philippines (Mindanao).

Subfamily Adrastinae FLEUTIAUX, 1940

Glyphonyx erraticus CANDÈZE, 1875

Glyphonyx erraticus CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18 : 127 (Luzon, Mindanao).

—FLEUTIAUX, 1914, Philip. J. Sci. 9(5), Sec. D : 449 (Luzon).—FLEUTIAUX, 1916, Philip.

J. Sci. 11(3), Sec. D : 233 (Luzon, Mindanao).—VAN ZWALUWENBURG, 1936, Philip.

J. Sci. 59(3) : 430 (Luzon, Mindanao).

Specimen examined : MINDANAO : 1 ex., Upper Bayabas River, alt 900 m, Davao City, 23. XI. 1969, Y. Miyatake leg.

Distribution : Philippines (Luzon, Mindanao).

Glyphonyx posticus CANDÈZE, 1875 (Pl. 1, f. J)

Glyphonyx posticus CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18 : 127 (Mindanao).—FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D : 233 (Luzon, Mindanao).—VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3) : 430 (Luzon, Mindanao).

Specimens examined : MINDANAO : 1 ex., Upper Catigan, alt 800 m, Davao City, 22.

XI. 1969, I. Hiura leg.; ditto, 1 ex., Capatagan, alt 1100 mm, Davao del Sur, 27. XI. 1969, Y. Miyatake leg.

Distribution : Philippines (Luzon, Mindanao).

Subfamily Cardiophorinae LENG, 1910

Ryukyucardiophorus alvini (FLEUTIAUX, 1916) **comb. nov.** (Pl. 1, f. L)

Cardiophorus alvini FLEUTIAUX, 1916, Philip. J. Sci. 11(3), Sec. D : 230 (Luzon).—VAN

ZWALUWENBURG, 1936, Philip. J. Sci. 59(3) : 419 (Luzon).

Specimen examined : LUZON : 1 ex., Mt. Maquiling, Mudspring, alt 400 m, Laguna, 21. XII. 1969, I. Hiura leg.

Distribution : Philippines (Luzon).

Dicronychus (Platynychus) spernendus (CANDÈZE, 1875) **comb. nov.** (Pl. 1, f. M)
Cardiophorus spernendus CANDÈZE, 1875, Ann. Soc. Ent. Belg. 18 : 125 (Mindanao).—

VAN ZWALUWENBURG, 1936, Philip. J. Sci. 59(3) : 420 (Mindanao).

Specimen examined : MINDANAO : 1 ♂, Capatagan, alt 1100 m, Davao del Sur, 27.
XI. 1969, Y. Miyatake leg.

Distribution : Philippines (Mindanao).

Explanation of Plate 1

- Fig. A : *Paracalais semperi* (CANDÈZE, 1875); body length 23 mm.
Fig. B : *Agraeus mannerheimi* CANDÈZE, 1857; 4 mm.
Fig. C : *Brachylacon* (*Brachylacon*) *borneonsis* ÔHIRA, 1973; 4.5 mm.
Fig. D : *Abelater cinctus* (FLEUTIAUX, 1916) comb. nov.; male, 55 mm.
Fig. E : *Hemirrhaphes candezei* FLEUTIAUX, 1916; 3.5 mm.
Fig. F : *Hydponus bakeri* (FLEUTIAUX, 1914); 3 mm.
Fig. G : *Melanotus* (*Melanotus*) *ebeninus* CANDÈZE, 1860; 13 mm.
Fig. H : *Melanotus* (*Melanotus*) *palawanensis* sp. nov.; 12 mm (holotype).
Fig. I : *Neotrichophorus phillipsi* VAN ZWALUWENBURG, 1936; 12 mm.
Fig. J : *Glyphonyx posticus* CANDÈZE, 1875; 5.5 mm.
Fig. K : *Abelater morio* (CANDÈZE, 1878) comb. nov.; 4.5 mm.
Fig. L : *Ryukyucardiophorus alvini* (FLEUTIAUX, 1916) comb. nov.; 3.5 mm.
Fig. M : *Dicronychus* (*Platynychus*) *spernendus* (CANDÈZE, 1875); 7 mm.

